Stress and Burnout Among Critical Care Nurses  
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Abstract
Stress and burnout are major factors that nurses have to deal with often while in their work environment. This research was aimed to identify stressors, effective coping skills and the impact that stress has on patient care and the nurses themselves. This study was conducted using a convenience sample of 48 critical care nurses at a hospital in West Georgia. The Maslach Burnout Inventory and the Critical Care Nursing Stress Scale were used to measure levels of stress, burnout, and effective coping skills. All data was distributed and collected by the researchers. Ethical considerations have been taken into account to uphold confidentiality and prevent biases in the study.

Purpose
The purpose of this research was to determine the amount and type of stress that critical care nurses experience as a result of their day to day work environment. If nurses and other healthcare professionals are able to determine stressors in the work environment, they may be better able to handle problems when, and even before, they arise. This study was also aimed at determining effective coping skills used by critical care nurses to help manage stress. The identification of effective coping skills may be useful to other healthcare workers to help them manage stress. Other phenomena explored include the amount of stress and the relation to burnout among critical care nurses, which in turn may decrease the efficacy of patient care. Gillespie and Melby (2003) recognized that “stress and burnout have far reaching effects both for nurses in their clinical practice and personal lives. If nurses continue to work in their current environment without issues being tackled, then burnout will result”.

Theoretical Framework
The theoretical framework for the research was guided by Roy’s Adaptation Model. Using this model, the researchers examined the way in which critical care nurses adapt to stress in their environment and how they integrate the use of coping skills to effectively manage stress. If critical care nurses are unable to adapt to their environmental stressors, levels of stress and burnout will almost surely rise as well. The use of effective coping skills to manage stress is a common way of adapting to the environment.
Literature Review

There have been numerous studies conducted in the area of stress and burnout among nurses, but only a limited number specifically have looked at critical care nursing. Based on the review of literature “it is evident that a limited amount of up-to-date empirical information is available” (Gillespie & Melby 2003).

Early research by Keller (1990) identified stressors in emergency nursing as well as effective coping skills used to decrease the stress levels. Emergency nurses that used a combination of short and long term coping skills reported lower levels of burnout and higher levels of personal accomplishment and job satisfaction. The Maslach burnout inventory was the main survey tool used in this study (Keller 1990).

Sawatzky (1996) examined the specific stressors related to critical care nursing. The research showed that the highest stress levels were related to patient care and management issues. This research is important to the nursing field because “if the origins of stress in the ICU can be identified and controlled, improved nursing performance will lead to a consistent level of optimal patient care” (Sawatzky 1996).

In another study, Adali and Priami (2002), examined the levels of stress in emergency, intensive care, and internal medicine units using the Maslach Burnout Inventory. The study revealed that nurses in the emergency department experienced a higher level of stress and related burnout than those that worked in the intensive care or internal medicine wards (Adali & Priami 2002).

In 2003, Gillespie and Melby conducted research aimed at determining stressors, affects on patient care, and the impact of stress outside of the clinical setting. This research showed that nurses in an acute medicine environment had higher levels of stress than those working in accident and emergency medicine (Gillespie & Melby 2003).

More research needs to be done in an attempt to identify possible stressors which will in turn decrease levels of stress in the nursing environment, and

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ultimately lead to reduced rates of burnout and improved patient care. The more research that is conducted, the more professionals will recognize the importance of this matter in relation to the nursing profession as a whole.

**Research Question(s)**
What coping skills are utilized most often by critical care nurses?
Do increased levels of stress contribute to increased levels of burnout?
Is there a difference in the amount and/or type of stress experienced based on working in the ICU or the ED?

**Study Setting**
The study took place in a 276 bed hospital in West Georgia. The study was conducted inside of the nurse's normal working environment and did not interfere with patient care.

**Study Design**
A descriptive correlational comparative design was used to determine if there was a relationship between stress and burnout in critical care nurses, and to compare the use of effective coping mechanisms to decreases stress. The descriptive correlational design was also used to see if there is a relationship between increased stress levels and the efficacy of patient care.

**Sampling Criteria**
Inclusion criteria for the study required that the participants have a BSN, RN degree or an ADN, RN degree and have worked in the critical care area for at least two years. Due to low levels of survey return, the number of years worked in the critical care area was deleted from the inclusion criteria. Critical care areas are defined as the Intensive Care Unit and the Emergency Department. Demographic variables were examined in an attempt to decrease other environmental stressors outside the workplace that may influence the study findings.

**Sampling Procedure**
The sample was selected by means of a convenience sample. The surveys were distributed on both day and night shifts by the researchers. The desirable sample size was 50 participants. A total of 23 surveys were returned and able to be analyzed; 16 from the ED and 7 from the ICU.

**Instruments**
The Maslach Burnout Inventory and the Critical Care Nursing Stress Scale were used. The Maslach Burnout Inventory, developed by Maslach and Jackson, consisted of 22 questions and examines three dimensions of burnout: emotional exhaustion, depersonalization, and low personal accomplishment. The Critical Care Nursing Stress Scale (CCNSS), developed by Sawatzky, consisted of 40 questions and participants are asked to respond using a Likert scale. The
CCNSS categorizes stressors as 1) management of the unit, 2) interpersonal relationships, 3) patient care, 4) knowledge and skill, and 5) physical work environment. Authorization has been provided by the author of the CCNSS to use the instrument in the study.

**Retrieving, Storing, and Analyzing Data**

The researchers gave the surveys to the nurse manager of the ICU to be distributed and returned. The researchers distributed and collected the surveys from the ED. The data was then stored in a secure compartment where the location was known only by the researchers. Subjects were asked not to write their names on the surveys to ensure that all identities were protected. The researchers analyzed all data to answer research questions and then destroyed all surveys. Percentages were used to analyze the data, as well as the scoring key for the Maslach Burnout Inventory.

**Ethical Considerations**

The researchers adhered to the confidentiality regulations of the participating hospital, which included HIPPA regulations. The study was reviewed by the Institutional Review Board of LaGrange College and the participating hospital. The nature of the study was purely descriptive by means of surveys. No experimentation or interventions took place. An informed consent was given to all participants which was attached to the surveys they received. The informed consent notified all participants of the purpose of the study and their rights as participants, as well as all ethical considerations taken by the researchers.

**Timetable for the Study**

The researchers went to the departments being surveyed at the end of each week for four weeks to collect the surveys. Surveys were given to the nursing staff on each shift, morning and night. The researchers allowed two weeks for the data to be analyzed.

**Findings, Conclusions, and Implications**

The finding of the research showed that critical care nurses experienced high levels of stress. The areas that produced the most stress varied depending on work in the ED or the ICU. Most of the stressors from the ED were the result of patient care, particularly from chronic and/or unstable patients. Most ICU stressors were the result of management of the unit, particularly inadequate staffing. The most frequently used coping skills by both the ED and ICU were the use of humor and talking about stressors with others. Nurses in the ED and ICU experienced comparable amounts of feelings of burnout according to the findings. The ED reported a wide range of emotional exhaustion, while ICU reported medium levels of emotional exhaustion. The ED reported med-high levels of depersonalization, while the ICU reported low-med levels.
of depersonalization. The majority of ED and ICU nurses expressed medium levels of personal accomplishment. These findings were congruent with much of the research available on stress and burnout in critical care nurses.

The implications for this study are that if nurses and other healthcare professionals are able to determine stressors in the work environment then they may be better able to handle problems when, and even before, they arise. The identification of effective coping skills may be useful to other healthcare workers to help manage stress. Nurse managers of the ED and ICU will be able to use this information to decrease the stressors that their employees may face in the work environment. This information would be particularly helpful to the nurse manager of the ICU because many of the stressors reported by the participants were the result of managerial issues.

The need for further research is needed in this area of research to increase nursings’ body of knowledge, to increase the efficacy of patient care, and to decrease the burnout levels among nurses.

**Limitations**

The limitations of the study included the relatively small sample size and the fact that only one hospital was included. All surveys were not completed due to the extensiveness of the survey and/or the lack of understanding of some questions. The inclusion criteria had to be changed to include those nurses with less than two years critical care experience based on low levels of survey return. The fact that both researchers were precepting in the ED at the time of survey distribution and collection may have influenced some of the outcomes of the research.

**References**


**Appendices not included.**